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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,474	06/14/2006	Pavel Pekarski	DE030430	7013
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EXAMINER LE, TUNG X				
ART UNIT 2821		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/596,474

Applicant(s)

PEKARSKI ET AL.

Examiner

TUNG X. LE

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 12 and 16 is/are rejected.
- 7) ☒ Claim(s) 8-11, 13-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This Office Action is in response to the Applicants' communication filed on June 14, 2006, preliminary amendment concurrently filed therewith. In virtue of the information provided therein:

- Claims 1-17 were originally filed;
- Claim 17 has been cancelled; and
- Thus, claims 1-16 are now presented in the instant application.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

2. Claims 1, 6-9, and 11-12 are objected to because of the following informalities:

Claim 1, line 2, "the" should be deleted;

Claim 1, line 3, "normal" should be changed to --a first--;

Claim 1, line 4, "the" should be changed to --a--;

Claim 1, line 5, "U1" should be deleted;

Claim 1, line 8, "U1" should be deleted;

Claim 1, line 9, "the" (first occurrence) should be changed to --a--;

Claim 1, line 9, "the" (second occurrence) should be deleted;

Claim 1, line 10, "the" (first occurrence) should be changed to --a--;

Claim 1, line 10, insert --the-- before "burning";

Claim 6, line 2, "U1" should be deleted;

Claim 7, line 2, "U1" should be deleted;
Claim 8, line 3, "U2" should be deleted;
Claim 8, line 4, "U1" should be deleted;
Claim 8, line 8, "U2" should be deleted;
Claim 9, line 2, "U2, U1" should be deleted;
Claim 11, line 2, "U2" should be deleted; and
Claim 12, line 3, "the" should be changed to --an--.
Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 1, the recitations "operation having a first" in line 3 and "operation with a second" in line 6 render the claim indefinite since it is not clear what a first and a second are.

Clarification is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 3, 6, 7, 12, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Sun et al. (U.S. Publication No. 2004/0183463 A1).

With respect to claim 1, Sun discloses in figures 1-2 a method of operating a discharge lamp [Lamp 2], in particular during first hours of operation after manufacture of the lamp, in a first, a first mode (having a first normal mode in paragraph [0009]) having a first operating frequency [f1], which is activated when a burning voltage (a igniting/starting voltage) of the lamp is higher than a first limit value (paragraphs [0028-0029]) that can be preset, and a second mode (having a second operation mode at a second frequency [f2], see paragraph [0009]) of operation with a second, higher operation frequency [f2] which is activated when the burning voltage of the lamp reaches the first limit value and which is chosen such that a growth of electrodes (the lamp 2 having two electrode disposed therein), and according a drop in the burning voltage caused in particular by the formation of thinner electrode tips, is limited (figure 1, and paragraphs [0028-0029, 0066]).

With respect to claim 3, Sun discloses that the lamp current is superimposed with current pulses in the first mode of operation for avoiding unstable arc discharge (see figure 4).

With respect to claim 6, Sun discloses that the first limit value lies at a voltage which is approximately 10V higher than a minimum voltage of a lamp driver unit at

which the unit can still drive the lamp with its rated power or a desired power (paragraph [0020]).

With respect to claim 7, Sun discloses that the first limit value has a hysteresis (see figures 1 and 4).

With respect to claim 12, Sun discloses that the second operating frequency is synchronized with an image frequency of a display system (paragraph [0030]).

With respect to claim 16, Sun discloses that a computer program with program code runs on a programmable microcomputer (see figure 1 having a microcontroller for programmable codes).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2 and 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun et al. (U.S. Publication No. 2004/0183463 A1) in view of Kumagai et al. (U.S. Publication No. 2006/0049777 A1).

With respect to claims 2 and 4-5, Sun discloses all of the claimed limitations, as expressly recited in claim 1, excepted for specifying that the first operating frequency is from 50-200 Hz, the second operating frequency is from 300-1500 Hz, and a factor of the second frequency and the first frequency is 2 to 20. Kumagai inherently discloses

a method of operating a discharge lamp [DL] having a first operating frequency (100Hz to 200Hz) and a second operating frequency [360 KHz] (paragraph [0114]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the controller and the resonant circuit of Sun by setting the relationship between the first and second frequencies having the values therein in order to improve a stable operation in a long life of the lamp since such a configuration of the relationship of the first and second operating frequency for state purpose has been well known in the art as evidenced by the teaching of Kummagai (paragraphs [0023, 0027]).

Allowable Subject Matter

9. Claims 8-11 and 13-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter:

Prior art of record fails to disclose or fairly suggest:

- The method further comprising a third mode of operation which is activated when the burning voltage of the lamp reaches a second limit value which can be preset and which is lower than the first limit value, and in which third mode of operation the discharge path between the electrodes is lengthened by a change in at least one operating parameter of the lamp until the burning voltage exceeds the second limit value, in combination with the remaining claimed limitations as

claimed in dependent claim 8 (claims 9-11 would be allowable as being dependent on claim 8).

- A circuit arrangement for implementing the method comprising a comparator for comparing the burning voltage with at least one of the two limit values and a generator for generating the operating frequencies of the lamp current in dependence on the output signal of the comparator as claimed in dependent claim 13 (claims 14-15 would be allowable as being dependent on claim 13).

Citation of Relevant Prior Art

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Kominami et al. (U.S. Publication No. 2002/0047645 A1) discloses a ballast for discharge lamp.

Prior art Paul et al. (U.S. Patent No. 5,677,602) discloses a high efficiency electronic ballast for high intensity discharge lamps.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUNG X. LE whose telephone number is (571)272-6010. The examiner can normally be reached on 8:30 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Owens can be reached on 571-272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TXL 09/30/2008

/David Hung Vu/
Primary Examiner, Art Unit 2821